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Moral Development and Appreciation of Aggressive Humor: A Review of the Literature

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Abstract

Nineteen empirical sources are reviewed with the purpose of evaluating the potential of the relationship between level of moral development and appreciation of aggressive humor for future inquiry. Sixteen articles generated from the superiority theory of humor are categorized as measuring appreciation of aggressive humor (and drama) in relation to (a) characteristics of depicted protagonists, and (b) characteristics of depicted aggressive actions. Three sources directly addressing moral development in relation to appreciation of aggressive humor are characterized by distinct research problems and methodologies, thus, rendering comparison of results difficult. Nonetheless, the moral development construct is shown to be useful in measuring appreciation of aggressive humor. The studies are critically examined, and threats to internal and external validity are discussed. Recommendations for future research emphasize investigation of the reliability and validity of instruments used to assess humor appreciation; computation of a humor appreciation score for each subject; and measurement of subject variables, along with moral development, to enhance interpretability of the data.

Moral Development and Appreciation of Aggressive Humor: A Review of the Literature

Intuitively, moral development and aggressive humor address the same issues (Hancks, 1980). Both are concerned with judgments about interpersonal conflict and the misdeeds of others. While moral development deals with judgments about the fairness of an act, aggressive humor entails judgments about the funniness of an act.

Theoretically, it has been suggested that cognition and social perception underlie both judgments of fairness and judgments of funniness. According to Kohlberg (1976), attainment of certain logical and role taking stages is a necessary condition for moral development. Specifically, Kohlberg views social perception or role taking level as a bridge between cognitive level and moral level. Similarly, McGhee (1974a, 1974b) observes that a sufficient level of cognitive mastery over the content area is needed in order to see a joke as funny. As Levine (1968) points out, "appreciating a joke means that we are able to master the symbolic properties with their multiple figurative and allegorical referents" (p. 2). Moreover, social perception of the behavior (Zillmann & Bryant, 1974) or characters (Gutman & Priest, 1969) of the

protagonists in a hostile joke may play an important role in appreciation of humorous aggression. The importance of social perception in humor appreciation is captured in Hobbes' classic statement, from which the superiority theory of humor (cf. Keith-Spiegel, 1972; Morreall, 1987; Zillmann, 1983) emerged, that laughter is "sudden glory arising from some sudden conception of some eminency in ourselves, by comparison with the infirmity of others, or with our own formerly" (cited in Morreall, 1987, p. 20). Thus, cognitive developmental and social psychological processes may account for both moral judgments and judgments about humor.

This paper reviews the empirical literature on the relationship between level of moral development, as conceptualized by Piaget (1965) and Kohlberg (1976), and appreciation of aggressive humor. Aggressive humor is defined as humor with hostile intent to ridicule, depreciate, or injure (Hetherington & Wray, 1964, 1966).

An on-line computer search turned up two published articles and one doctoral dissertation addressing moral development in relation to humor. These three sources are included in the present review. Tracking citations from these sources, however, revealed a substantial body of published literature generated from the superiority theory of humor. Studies emphasizing the role of gender

in humor appreciation were excluded from the present review. All the remaining ancestral (Cooper, 1982) studies are included in this review with one major exception: the extensive work of La Fave (1972) and his associates is represented by a single comprehensive article. Furthermore, one ancestral study differs from the others in its focus on appreciation of dramatic, rather than humorous, aggression. Thus, the purpose of this review is to examine 19 empirical sources which have either ancestral (16) or direct (3) bearing on the relationship between level of moral development and appreciation of aggressive humor, and to evaluate the potential of this association for future inquiry.

Superiority Theory of Humor

Superiority theory can be traced to the writings of Plato, Aristotle, and Hobbes (cf. Keith-Spiegel, 1972; Morreall, 1987; Zillmann, 1983). For Plato in Philebus (cited in Morreall, 1987), our amusement is a kind of malice toward people who are relatively powerless, and laughter is something to be avoided. Aristotle in Poetics (cited in Morreall, 1987) agreed with Plato that comedy is essentially derisive and that in being amused by someone we are finding that person inferior in some way. Thus, for these writers, humor is primarily an

expression of human aggression, and the purpose of jokes is to denigrate others (Raskin, 1985).

In Leviathan and Human Nature, however, Hobbes (cited in Morreall, 1987) stated that humor allows for self-glorification in comparison with the infirmities of others, or with our own former position. According to Zillmann (1983):

> As in the older views, Hobbes dwells on the infirmities and imperfections of others. But he differs in the projection of who laughs at whom. Whereas Plato and Aristotle had suggested that the infirmity stricken would draw the laughter of the powerful and unblemished, Hobbes thought that it would be the imperfect and blemished--those in greater need of self-enhancement--who would laugh at others who seem even less endowed and more unfortunate (p. 86).

Thus, Hobbes viewed laughter as a mark of the inferior.

More recent refinements of superiority theory incorporate the notion that people seem to discriminate socially in the enjoyment of the infirmities of others (Zillmann, 1983). One position contends that we do not enjoy the debasement of others equally, independent of our attitudinal (e.g., La Fave, 1972) or affective (e.g., Zillmann & Cantor, 1976) disposition toward them.

Yet another position maintains that our enjoyment of the misfortunes befalling others depends in large measure on the intensity of the aggressive activities themselves (e.g., Cantor & Zillmann, 1973; Zillmann & Bryant, 1974). Empirical data generated from the latter line of reasoning are quite suggestive of an association between moral level and appreciation of aggressive humor.

Research

This section reviews 19 sources which have ratings of appreciation (e.g., funniness) of aggressive humor, or drama, as their major dependent (criterion) variable. The 16 ancestral sources can be broadly categorized in terms of their major independent (predictor) variables. These categories are (a) characteristics of depicted protagonists (10 entries), and (b) characteristics of depicted aggressive actions (6 entries). A third category includes the three sources addressing level of moral development in relation to humor appreciation. The primary features and outcomes of each category of studies are summarized in Tables 1-3.

Characteristics of depicted protagonists. Three studies investigated the racial-ethnic group of depicted victims in relation to appreciation of aggressive humor. Driven by superiority theory, Wolff, Smith, and Murray (1934) measured humor responses to disparagement jokes.

These researchers, however, distinguished between affiliated and unaffiliated objects of disparagement. Sixteen written jokes were presented, eight of which, distributed at random in the sequence, were disparaging of Jews. Six Jewish and nine Gentile college students gave verbal humor ratings immediately after each joke was presented. As predicted, average ratings per type of joke indicated that jokes at the expense of Jews were appreciated more by Gentiles than by Jews. The Wolff et al. hypothesis was not supported, however, when Jewish jokes were transformed into Scotch jokes and presented to new subjects (five Jewish and six Gentile college students): the Gentiles were more appreciative of the Scotch jokes than were the Jews. The investigators speculated that the stereotype of Scotch stinginess is commonly attributed to Jews, hence, Jewish subjects had mentally affiliated themselves with the Scotch and perceived the jokes as also disparaging to themselves. Wolff et al. concluded that a positive response to a disparagement joke is an index of negative sentiments toward the disparaged object.

Middleton (1959) compared reactions to racial jokes by matched groups of 50 Negro and 50 white university students. Eighteen written jokes--six anti-Negro jokes, six anti-white jokes, and six control jokes--were rated

on a 7-point scale for funniness. Comparison of percent of ratings showed that Negroes reacted more favorably than whites to anti-white jokes, but no significant difference was found between whites and Negroes in reactions to anti-Negro jokes. Middleton interpreted the latter finding in terms of university students' identification with the middle class. Specifically, Negro university students of lower class backgrounds may take the middle class as a reference group and, hence, may interpret anti-Negro jokes as ridiculing lower class Negroes, rather than Negroes in general.

With boys and girls, ages 3 to 6, McGhee and Duffey (1983a) examined appreciation of humor depicting victims of other racial-ethnic groups. Black, Mexican American, and white children (N = 281) were presented with six pairs of drawings. Each drawing depicted two children of the same sex but different racial-ethnic identity. The children were asked to point to the funnier of each pair of drawings. Order of presentation of the six pairs was randomized independently for each child. Binomial tests were computed on the frequency of consistent choices within each pair of drawings; children with inconsistent responses were excluded from the analyses. Only white children found it funnier to see a child of another racial-ethnic group, rather than

a child of their own group, victimized in humor. McGhee and Duffey explained the lack of significant humor preferences among black and Mexican American children as a function of later positive identification, compared to earlier positive identification of white children, with their own racial-ethnic group.

In brief summary, these three studies have advanced superiority theory by specifying a limiting condition--identification with the victim--for appreciation of aggressive humor (Zillmann, 1983). This finding should be considered as exploratory, however, because pretest measures of subjects' attitudes toward the depicted racial-ethnic groups were not obtained.

La Fave (1972) and his associates formalized the role of attitudes in humor judgments in their "vicarious superiority theory" which predicts, in essence, that "a joke may prove especially funny when the good guys beat the bad guys" (p. 197). The La Fave group employed the constructs "positive reference group" (+RG) or "positive identification class" (+IC) and "negative reference group" (-RG) and "negative identification class" (-IC) to investigate appreciation of aggressive humor. These researchers also introduced a methodological improvement by assessing subjects' attitudes toward presumed +RGs. In the prototype study, five religious jokes, with four

counterbalanced permutations each, allowed subjects to act as their own controls. In addition, each subject's deck of jokes was shuffled into a different order to randomize out social contagion and order effects, and a brief questionnaire was administered to ascertain subjects' preferred religious groups. On a sign test, all 20 jokes came out in the direction predicted by a vicarious superiority theory. Three stripped-down replications were then performed on other social issues, garnering additional support for the assumption that RGs and ICs "influence" humor judgments in predictable ways.

Two studies by Priest (1966) and Priest and Abrahams (1970) employed the reference group construct to investigate appreciation of hostile political humor. In the Priest study, 130 college students were each presented with a booklet containing 15 derogatory political jokes on election day in 1964. Subjects were asked to rate the funniness of each joke on a 9-point scale. The difference between the ratings for the five Republican jokes and the five Democrat jokes was taken as a measure of differential humor. Controlling for several extraneous varaibles, multiple regression showed that members of a reference group enjoyed derogatory jokes about another group more than jokes about their own group. On the day before the 1968 election, Priest

and Abrahams presented 20 pretested political jokes to two groups of college students (N = 155). The jokes were presented in random order and rated on a 7-point scale for funniness. Measures of subjects' reference groups (candidate preference) and membership groups (party preference) were also obtained. Results showed that party preference, as well as candidate preference, correlated substantially with differential humor. The researchers, thus, replicated the results of the Priest study, and they concluded that, for political humor, appreciation of hostility depends upon the particular target against which it is directed.

In brief summary, the reference group construct is shown to be useful in measuring humor appreciation. RG also reconciles the discrepant findings of Wolff et al. (1934) and Middleton (1959). La Fave (1972) argues, however, that the IC construct is preferable to the RG construct. Any IC has both an emotive and a cognitive component, thereby introducing greater generality, rigor, and potency into the hostile humor arena.

A study by La Gaipa (1968) is reviewed here, not for its findings per se, but for its implications for assessing humor appreciation. Using 151 college students, two forms of a cartoon test were developed to permit counterbalanced presentation of the material.

Controlling for the objects and agents of aggression, and for their relative status, each form contained 32 cartoons characterized by authority figures as objects of aggression, authority figures as agents of aggression, peer aggression, and nonsense. Split-half reliabilities of the cartoon types in each form averaged .65, with a high of .74 for cartoons showing authority figures as objects of aggression. In the experiment, 160 fraternity students, assessed for authoritarianism, rated each cartoon on a 9-point scale for funniness. A subtest score was computed for each subject for each cartoon type. La Gaipa's experimental procedure is beyond the scope of the present review. Nevertheless, it is noted that low authoritarians preferred cartoons presenting authority figures as objects of aggression, whereas high authoritarians preferred cartoons presenting authority figures as agents of aggression. No significant differences were found for cartoons showing peer aggression. Thus, the results demonstrate the need to consider the stimulus characteristics of hostile humor in attempting to assess humor preferences.

Zillmann and Cantor (1972) investigated reactions to aggressive humor stimuli in which one protagonist temporarily dominates another. Six cartoon and jokes were manipulated so that in the "upward" condition a

subordinate dominated a superior, and in the "downward" condition a superior dominated a subordinate. Reactions to four cartoons and jokes depicting exchanges between equals served as a control measure. Booklets of the upward and downward conditions were randomly assigned to subjects. A random sequence of stimuli was determined, and then used in all booklets. Twenty male and 20 female college students, and 40 male professional people (commuter train passengers), rated each cartoon and joke on a 100-point scale for funniness. Using composite scores in a 2 X 2 independent measure design, ANCOVA showed that the students appreciated the stimuli in the upward condition and the professional people appreciated the stimuli in the downward condition. The authors interpreted these findings as consistent with the notion that "who disparages whom" is a critical factor in humor appreciation.

Using boys and girls as subjects, three studies by McGhee and Lloyd (1981) and McGhee and Duffey (1983b) manipulated the relative status of victims depicted in aggressive cartoons. McGhee and Lloyd presented preschoolers and first graders (N = 111) with 10 pairs of drawings. The two drawings within each pair were identical, except for the reversal of the person victimized by some mishap. The comparison of victims

were: boy-girl, father-son, father-daughter, mother-son, and mother-daughter. The children were asked to choose the funnier of each pair. Order of presentation of the 10 pairs was randomized independently for each subject. Binomial tests were computed on the frequency of consistent choices within each pair and children with inconsistent choices were excluded from the analyses. Results showed that the children generally found it funnier to see a parent victimized than to see a child victimized. The data obtained for humor victimizing the opposite sex is not relevant to the present review. McGhee and Duffey conducted two replications of this study with 238 low-income black, Mexican American, and white children, ages 3 to 6, and with 79 middle-income white children, ages 4 to 6. The data obtained from all four groups were generally consistent with those of the McGhee and Lloyd study: humor victimizing a parent was funnier than humor victimizing a child. The results of the three studies were explained in terms of the degree of similarity between the subjects and the depicted victims of aggressive humor.

In summary, these five studies have demonstrated that relative status of depicted protagonists plays an important role in humor appreciation. In only one study, however, was a measure of similarity between

subjects and depicted protagonists actually obtained. Although the forced-choice methodology used in the studies with children differs from that used in the adult studies, the 10 articles reviewed in this section provide subtantial evidence for the disposition theory of humor (Zillmann & Cantor, 1976), which proposes that humor appreciation varies inversely with the favorableness of the subject's disposition toward the victim of disparagement, and varies directly with the favorableness of the subject's disposition toward the aggressor, or agent of disparagment.

Characteristics of depicted aggressive actions. The disposition theory of humor has also received support from research emphasizing characteristics of the depicted aggressive activities themselves, rather than exclusively focusing on characteristics of the depicted protagonists. Gutman and Priest (1969) demonstrated that social perception of the behavior displayed by the protagonists in an aggressive joke is related to humor appreciation. It was predicted that if a victim who behaves badly receives the final hostile punchline, the joke will be rated as more humorous since the outcome is consistent with intuitive notions of justice (cf. Heider, 1958). Secondly, it was predicted that if an aggressor behaves badly, the hostile joke will be rated

as more hostile and less humorous. Protagonists of the same sex and equal status were depicted in four aggressive jokes which manipulated perceived social characters (i.e., behavior) of the aggressor (A) and the victim (V) in the following permutations: good A/bad V, good A/good V, bad A/bad V, and bad A/good V. Using a Latin square design to counterbalance joke versions, 96 male and 96 female college students rated one version of each joke for humor, hostility, social acceptability of A, social acceptability of B, and justifiability of aggression. Separate ANOVAs showed that the jokes were rated as positively justified only in the good A/bad V condition, and that they were rated significantly more hostile in the bad A/good V condition and significantly more humorous in the good A/bad V condition. Duncan multiple-range tests indicated that very high hostility and very low justifiability were associated with very low humor ratings. Results confirmed both hypotheses.

Cantor and Zillmann (1973) crossed affect toward and victim and degree of misfortune in manipulations of aggressive cartoons. Characteristics of the victims leading to sympathy or antipathy, and of the severity of the mishap (low versus high), were varied. Relatively neutral sources of aggression (e.g., animals) were used to control for identification with the aggressor.

Seventy-six male and female college students rated five unmanipulated cartoons (covariate) and seven manipulated cartoons (criterion) on a 100-point scale for funniness and on a 10-point scale for affect toward the victim. Booklets of the four conditions were randomly assigned to subjects. A random sequence of cartoons was determined, and then held constant in all booklets. Using composite scores in a 2 X 2 independent measure design, ANCOVA showed that the antipathy-low misfortune condition was rated significantly funnier than the antipathy-high misfortune condition, whereas the effect of increased severity of misfortune was negligible for the sympathy condition. The researchers called for further investigation to explain the significant decrease of appreciation for the antipathy condition as the severity of misfortune changed from low to high.

Zillmann, Bryant, and Cantor (1974) investigated brutality of assault in relation to appreciation of political cartoons. Two cartoons depicting presidential candidates undergoing hostile assaults were manipulated to induce three levels of brutality. A 3 X 2 X 2 X 2 independent measure design manipulated the degree of brutality, attitude toward the candidate, candidate depicted, and sex of subject. During the week preceding the 1972 election, 249 college students rated four

unmanipulated cartoons and two manipulated cartoons on a 200-point bipolar scale for funniness. The various conditions were equally represented in each booklet, and they were placed in a random sequence. Order of presentation of the cartoons was held constant for all booklets. The mean of the humor ratings for the first two unmanipulated cartoons was used as a base level against which appreciation of the manipulated cartoons was measured. ANOVA and Newman-Keuls tests showed a significant increase in appreciation for the favored candidate condition as degree of brutality changed from minimal to extreme, whereas, for the rejected candidate condition, appreciation decreased (nonsignificantly) as degree of brutality changed from minimal to extreme. Analysis of absolute scores indicated, however, that subtraction of base levels obscured evaluations of the manipulated cartoons (e.g., increased funniness versus decreased unfunniness). Nonetheless, the results were interpreted as reflecting respondents' perceptions of justice and fairness.

In brief summary, the three studies reviewed in this subsection yield conflicting results regarding the interaction between degree of depicted hostility, disposition toward depicted protagonists, and appreciation of humorous aggression. It was suggested,

however, that respondents' perceptions of justice and fairness may have mediated humor appreciation. This nomenclature is remindful of a link between appreciation of aggressive humor and moral development.

Rather than aggression directed toward a depicted victim, the following three studies examined retaliation by the victim toward the aggressor. In a test of disposition theory, Wicker, Barron, and Willis (1980) manipulated relative status of the protagonists (3 levels) and degree of retaliation (3 levels) in nine retaliation jokes. The latter manipulation was accomplished by varying the provocation and holding the rebuttal constant. Probable popularity of joke victims (3 levels) was varied in nine squelch jokes. Sixty-six female college students each received a booklet containing five unmanipulated jokes and 18 manipulated jokes. A Latin square arrangement was used so that each prototype joke appeared equally often at all levels of all factors of two different 3 X 3 X 3 factorial designs imbedded into the distribution of materials. Order of presentation of jokes in the booklets was random. Subjects rated the jokes on a 9-point scale for funniness and on eight other scales, and marked if they did not "get" the joke or had heard it before. Separate ANOVAs showed, contrary to previous results, that

relative status of protagonists was not significantly related to funniness. Significant inverse relationships between funniness and popularity of joke victims, and between funniness and overretaliation, were consistent with previous findings and with disposition theory.

Zillmann and Bryant (1974) manipulated degree of retaliation in jokes depicting two affectively neutral protagonists in an exchange of hostilities. This manipulation was accomplished by varying the aggressor's provocation so as to induce five levels of retaliation by the victim. The jokes were pretested to ensure the required perception of inequity. The stimuli appeared in a consistent order in booklets containing unmanipulated jokes and cartoons, and six manipulated jokes. College students (104 males and 11 females) rated each stimulus on a 100-point scale for funniness. Each subject's mean humor rating for the first two unmanipulated jokes was used as a base level against which appreciation of the manipulated jokes was measured. Degree of retaliation was factorially varied with sex of subject in an independent measure design. ANOVA computed on composite scores showed that subjects in the fair retaliation condition appreciated the jokes the most; inequity in retaliation, independent of its direction, resulted in decreasing funniness ratings.

Zillmann (1983), in a post hoc interpretation of these findings, argues that subjects exercised moral judgment in their reactions to the hostile jokes. It appears that a correspondence between deserving and receiving retaliatory treatment "leaves the respondents' sense of justice undisturbed and mirth reactions free to unfold" (p. 95). On the other hand, retaliatory actions that are too severe or too mild, relative to the provocation, seem to perturb intuitive justice and, hence, impair appreciation of humorous aggression.

In a study pertaining to dramatic, as opposed to humorous, aggression, Zillmann and Bryant (1975) investigated children's moral stages in relation to appreciation of retaliatory activities. Three versions of an audiovisually presented fairy tale were created to depict varying degrees of retaliation. The manipulation was accomplished by adjusting the good protagonist's rebuttal to the bad protagonist's provocation. Thirty 4-year-olds and 30 7-year-olds, assumed (on the basis of age) to be in the Piagetian stages of expiatory retribution and equitable retribution, respectively, served as subjects. A 2 X 3 factorial design varied developmental stage with degree of retaliation. Subjects' videotaped interviews were rated on 100-point scales by two judges to assess appreciation of

retaliation and other related responses. The means of the ratings of the two judges constituted the basic scores for analysis. As predicted by Piaget's model, for the younger children, appreciation increased with severity of retaliation; for the older children, all measures of appreciation were at a maximum in the fair retaliation condition, and lower in both conditions deviating from equity. ANOVA showed the interaction associated with this pattern of means to be significant on all measures. The authors concluded that depicted retaliatory activities are more highly appreciated the closer they approximate subjects' moral expectations.

In summary, across six studies manipulating the intensity of depicted aggressive actions, both high and low levels of humorous (or dramatic) hostility have been shown to impair, as well as to facilitate, appreciation. Apparently, appreciation of humorous aggression does not depend on the intensity of the hostile activities alone. Generalizing freely from Zillmann and Bryant's (1975) findings, any hostile act which, in the respondent's perception, is a violation of justice, should impair appreciation of humorous aggression. Investigation of this proposition, however, requires empirical assessment of the respondent's level of moral development.

Level of moral development. Three sources have explored level of moral development in relation to humor appreciation. McGhee (1974b) conducted three studies, using as subjects 40 boys and 40 girls in second grade, 112 males in second grade, and 168 males (56 fourth-graders, 56 eighth-graders, and 56 college freshmen), respectively, to investigate the relationship between moral level, as conceptualized by Piaget, and appreciation of humor. On the basis of five Piagetian-type moral judgment stories, half of the children in Studies 1 and 2 were categorized as functioning at either the heteronomous or autonomous moral level. Only autonomous subjects were used in Study 3. Humorous stories describing varying levels of quantity (2 levels) and intentionality (2 levels) of damaging outcomes were presented to all subjects and were rated on a 5-point scale for funniness. Drawings depicting the stories were added in Studies 2 and 3. In all studies, half of the subjects in each condition received one story version first, while the other half received the other story version first. Chi squares were computed on the frequency of choice of the funnier version for each condition. Data obtained in the three studies provide strong support for a relationship between level of moral development and appreciation of

aggressive humor. Generalizing across studies, McGhee concluded that "while an increase in naughtiness or moral unacceptability adds to the perceived humor in morally immature heteronomous children, it detracts from humor appreciation in adults and autonomous children" (p. 524).

Björkqvist and Lagerspetz (1985) examined moral development in relation to appreciation of aggressive humor with the purpose of providing more information about how children experience aggression in TV cartoon. The Piagetian distinction between preoperational and concrete operational stages of cognitive development was applied by selecting children from two age groups. Forty-five children (24 boys and 21 girls), 5 to 6 years old, and 42 children (19 boys and 23 girls), all 9 years old, viewed three cartoons depicting aggressive humor, aggressive drama, and nonaggressive suspense. The order in which the films were shown was rotated for each of the 18 groups of children. After viewing each film, the children were interviewed individually. The sum of six interview items was used to measure moral development and the reliability of this variable was estimated with Cronbach's alpha. Pearson's correlation coefficients and chi square tests of significance showed that moral understanding correlated positively with age, general

understanding, and sense of reality, and negatively with aggressive fantasies. In addition, moral judgments of a cartoon character's behavior by the younger children tended to depend on whether or not they identified with the character, rather than on separate ethical evaluations of the character's actions. This finding was taken as a demonstration that identification with aggressive film heroes affects moral evaluations of their behavior and may lead to attitude changes in the viewer. The researchers proposed a link between lower level of moral understanding and susceptibility to being affected by aggressive films.

A doctoral dissertation by Hancks (1980) consists of two studies investigating the relationship between level of moral development in adults and type of humor appreciated. Forty male college students and 48 male college students, respectively, were assessed for moral development using Rest's (1979) Defining Issues Test (DIT), a standardization of Kohlberg's moral development theory. Two broad categories of humor, incongruity and superiority/motivational (e.g., aggressive), were represented by 32 pretested jokes. In Study 1, the jokes were presented in written form and were rated on a 70-point scale for funniness and on three other scales. In Study 2, the jokes were tape-recorded and were rated

on a 70-point scale for funniness only. Using combined data from the two studies (N = 67), multiple regression yielded opposite curvilinear relationships between DIT scores and funniness ratings for the two types of jokes. Thus, subjects scoring in the middle range of the DIT distribution preferred incongruity jokes, while subjects scoring toward either end of the distribution preferred superiority/motivational jokes. Considering that 24 percent of their variance was explained by DIT scores, Hancks concluded that superiority/motivational jokes were most illuminated by Kohlberg's framework. It was recommended, nevertheless, that superiority/motivational humor be divided in subcategories, such as justifiable versus unjustifiable insults, to better understand the relationship between level of moral development and appreciation of aggressive humor.

In summary, these three sources, characterized by distinct research problems and methodologies, have demonstrated the usefulness of the moral development construct for studying appreciation of aggressive humor in children and adults. They also confirm the need to empirically assess moral development, as well as to consider the stimulus characteristics and mode of presentation of the hostile humor. Furthermore, the Björkqvist and Lagerspetz (1985) study points out the

implications of the relationship between level of moral development and appreciation of aggressive humor for the portrayal of humorous aggression in the popular media.

Consideration of Varied Outcomes

Tables 1-3 summarize the primary features and outcomes of each category of studies. In all tables, "S" refers to the subject, "V" refers to the depicted victim, and "A" refers to the depicted aggressor. Outcomes are designated as either positive significant (+S), nonsignificant (NS), negative signficant (-S) (Jackson, 1980), or curvilinear signficant (cS). Unless noted, gender differences were either negligible or not reported in these studies.

As shown in Table 1, there is little variability in the outcomes of the 10 articles relating appreciation of aggressive humor to characteristics of depicted protagonists. Discrepant findings are noted and can be accounted for in terms of identification, or onset of identification, with the depicted racial-ethnic group, or in terms of differences in sex-role development among boys and girls. Pretest measures of identification or similarity between subjects and depicted protagonists tend to resolve such discrepancies. Nevertheless, a clear majority of these studies support all or part of the proposition that aggressive humor produces more

appreciation the less social or experiential affinity the respondent has for the depicted victim, and the more social or experiential affinity the respondent has for the depicted aggressor (e.g., Zillmann & Bryant, 1974).

Insert Table 1 about here

Table 2 summarizes the six studies focusing on characteristics of depicted aggressive actions in relation to humor appreciation. For the most part, high levels of hostility impaired appreciation of humorous aggression toward a victim, whereas both high and low levels of hostility impaired appreciation of retaliation by a victim toward an aggressor. On the other hand, high levels of hostility facilitated appreciation in two studies. According to Piaget's moral development theory, this finding can be expected in young children. There is also an indication that "moral stage" may differentiate between younger and older children's appreciation of aggressive humor. In the study with adults, it is apparent that subjects' dispositions toward depicted protagonists interact with appreciation of humorous aggression.

Insert Table 2 about here

The three sources summarized in Table 3 address different aspects of the relationship betwen level of moral development and appreciation of aggressive humor. Although it is difficult to compare findings among these three sources, their results are, for the most part, consonant with predictions from Piaget's and Kohlberg's moral development frameworks. Indeed, allowing for differences in methodologies, the results of the McGhee (1974b) studies are generally consistent with those of Zillmann and Bryant (1975) shown in Table 2.

Insert Table 3 about here

The lack of variability of outcomes in this body of literature also requires explanation. This field is dominated by a few researchers and a few methodologies. For example, Zillmann authored five, while McGhee authored four, of these 19 sources; and samples of college students were used in 14, while samples of children were used in 9, of the 23 studies reviewed here. Furthermore, this body of literature undoubtedly represents a publication bias (Light & Pilemer, 1984).

That is, statistically significant findings are more likely to be published in refereed journals. Thus, treatments effects may be overestimated in this review.

Limitations of Research

There are many threats to the internal and external validity of this body of literature (Borg & Gall, 1983; Huck, Cormier, & Bounds, 1974). Only those which are most salient to the measurement of humor appreciation, however, will be discussed here.

Threats to internal validity. The primary threats to the internal validity of these studies are testing, instrumentation, the John Henry Effect, and experimental treatment diffusion. The rating scales used to assess humor appreciation are reactive measures. Thus, the evaluation process is itself a stimulus for change. In addition, most of these studies used unstandardized, ad hoc, humor instruments, and, in some cases, observer ratings, to assess humor appreciation. Both methods are subject to instrument decay.

Studies of humor appreciation may be tainted by subjects who either "try harder" and overrate funniness or "fun-fatigue" (La Fave, 1972) and underrate funniness, or who are vulnerable to "social contagion" (La Fave, 1972), especially when tested in groups. On

the other hand, most of these researchers took care to control for order effects as a rival hypothesis.

Threats to external validity. The generalizability of these results is hindered by both population and ecological sources of external invalidity. For the most part, "convenience samples" of college students are represented here. Quite different results might have been obtained from randomly selected or more varied samples.

A pervasive lack of standardized instruments for assessing humor appreciation is evident in this body of literature. Most articles published only a sampling of the humor stimuli used, thus, prohibiting investigation of reliability and validity, as well as replication. Furthermore, the rating of humor in laboratory settings constitutes a highly artificial social situation. It is likely that subjects were sensitized to the nature of the experiments, and that they were influenced by demand characteristics and social contagion effects (La Fave, 1972). In addition, judges and experimenters may have given unintentional humor cues which biased appreciation ratings.

Theoretical limitations. This review represents several coherent derivatives of the superiority theory of humor, such as vicarious superiority theory (La Fave,

1972), reference group theory (e.g., Priest, 1966), and disposition theory (Zillmann & Cantor, 1976). Although disposition theory seems to be the most comprehensive of these three theoretical advances, it does not account for personological variables, such as moral development, that have been shown to mediate appreciation of humorous aggression. It is proposed that a synthesis of disposition theory and moral development theory would yield a clearer understanding of individual differences in appreciation of aggressive humor.

Recommendation for Future Research

An entry point for future research would be the extension, by employing the moral development construct, of any of the studies reviewed here which focused on characteristics of depicted aggressive actions. Future researchers, however, should investigate the reliability and validity of instruments used to assess humor appreciation. Computation of a humor appreciation score for each subject, rather than mean ratings per joke, may also yield more meaningful results. Furthermore, measurement of subject variables, such as disposition toward the depicted protagonists and perceived equity or justifiability of the hostile humor, along with moral development, would enhance interpretability of the data.

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Table 1.

Summary of Studies Relating Appreciation of Aggressive Humor to Characteristics of Depicted Protagonists

Study	Sample	Measure of S	Manipulation	Outcome
Wolff et al. (1934)	College	R-E Group	R-E Group(V)	-S(V)[a]
Middleton (1959)	College	R-E Group	R-E Group(V)	-S(V)[b]
McGhee & Duffey (1983a)	Children	R-E Group	R-E Group(V)	-S(V)[c]
La Fave (1972)	College	RG/IC	RG/IC(V & A)	-S(V)[d] +S(A)[d]
Priest (1966)	College	RG	RG(V)	-S(V)
Priest & Abrahams (1970)	College	RG/MG	RB/MG(V)	-S(V)
La Gaipa (1968)	College	Authoritar-ianism	Relative Status(V & A)	-S(V) +S(A)
Zillmann & Cantor (1972)	College/ Profes-sional	Similarity to V & A	Relative Status(V & A)	-S(V) +S(A)
McGhee & Lloyd (1981)	Children	Similarity to V	Relative Status(V)	-S(V)*
McGhee & Duffey (1983b)	Children	Similarity to V	Relative Status(V)	-S(V)*
	Children	Similarity to V	Relative Status(V)	-S(V)*

Table 1 (continued)

Note. R-E Group = racial-ethnic group. RG = reference group. IC = identification class. MG = membership group.

[a]Only for Jewish jokes; +S(V) for Scotch jokes. [b]Only for anti-while jokes; NS(V) for anti-Negro jokes. [c]Only for white children; NS(V) for black and Mexican American children. [d]Three stripped-down replications yielded similar results. [e]Only for child versus parent victim; differences due to gender excluded.

Table 2.

Summary of Studies Relating Appreciation of Aggressive Humor to Characteristics of Depicted Aggressive Actions

Study	Sample	Measure of S	Manipulation	Outcome
Gutman & Priest (1969)	College	Social Perception of V & A	Behavior (V & A)	-S(V)
Cantor & Zillmann (1973)	College	Affect toward V	Mishap(V) X Depicted(V)	-S(V)[a]
Zillmann et al. (1974)	College	Attitude toward V	Assault(V) X Depicted(V)	+S(V)[b]
Wicker et al. (1980)	College	Liking for V	Popularity(V)	-S(V)[c]
		_____	Relative Status(V & A)	NS[c]
		_____	Retaliation (V to A)	-S(A)
Zillmann & Bryant (1974)	College	_____	Retaliation (V to A)	cS(A)
Zillmann & Bryant (1975)	Children	Moral Stage	Retaliation[d] (V to A)	+S(A)[e] cS(A)[f]

[a]Only in antipathy condition; NS in sympathy condition. [b]Only in favored candidate condition; NS negative trend in rejected candidate condition. [c]These results pertain to the discussion for Table 1. [d]Dramatic presentation. [e]Only for younger children. [f]Only for older children.

Table 3.

Summary of Studies Relating Appreciation of Aggressive Humor to Level of Moral Development

Study	Sample	Measure of S	Manipulation	Outcome
McGhee (1974b)	Children	Moral Level	Damage	+S[a]/NS[b]
	Children	Moral Level	Damage	+S[a]/-S[b]
	Children/ College	Moral Level	Damage	-S[b]
Björkqvist & Lagerspetz (1985)	Children	Moral Development	Behavior(A)	?[c]
Hancks (1980)	College	Moral Development/Level	Type of Humor	cS[d]

[a]Heteronomous subjects. [b]Autonomous subjects. [c]Did not assess appreciation. [d]Combined data from two studies; u-shaped for superiority/motivational, inverted u-shaped for incongruity humor.